CLAIMS

We claim:

1. An apparatus comprising:

a descriptor table, said apparatus for controlling flow of data between first and second data processing systems via a memory, said descriptor table for storing a plurality of descriptors for access by the first and second data processing systems; and

descriptor logic for generating the descriptors for storage in the descriptor table, the descriptors including a branch descriptor comprising a link to another descriptor in the table.

2. An apparatus as claimed in claim 1, wherein the descriptors generated by the descriptor logic comprise a frame descriptor defining a data packet to be communicated between a location in the memory and the second data processing system, and a pointer descriptor identifying the location in the memory.

3. An apparatus as claimed in claim 1, wherein the descriptor table is stored in the memory of the first data processing system;

4. An apparatus as claimed in claim 1, wherein the descriptor table is stored in a memory of the second data processing system.

5. An apparatus as claimed in claim 1, wherein the descriptor table comprises a plurality of descriptor lists sequentially linked together via branch descriptors therein.

6. An apparatus as claimed in claim 1, wherein the descriptor table comprises a cyclic descriptor list.

7. An apparatus as claimed in claim 1, wherein the first data processing system comprises a host computer system.

8. An apparatus as claimed in claim 1, wherein the second data processing system comprises a data communications interface for communicating data between the host computer system and a data communications network,

9. A data processing system comprising:

a host processing system having a memory, a data communications interface for communicating data between the host computer system and a data communications network, and

apparatus as claimed in claim 1, for controlling flow of data between the memory of the host computer system and the data communications interface

10. A method comprising controlling flow of data between first and second data processing systems via a memory, the step of controlling comprising:

storing in a descriptor table a plurality of descriptors for access by the first and second data processing systems; and

by descriptor logic, generating the descriptors for storage in the descriptor table, the descriptors including a branch descriptor comprising a link to another descriptor in the table.

11. A method as claimed in claim 10, further comprising, by the descriptor logic, generating a frame descriptor defining a data packet to be communicated between a location in the memory and the second data processing system, and a pointer descriptor identifying the location in the memory.

12. A method as claimed in claim 10, comprising storing the descriptor table in the memory of the first data processing system.

13. A method as claimed in claim 10, comprising storing the descriptor table in a memory of the second data processing system.

14. A method as claimed in claim 10, comprising forming the descriptor table by linking a plurality of descriptor lists in series via branch descriptors therein.

15. A method as claimed in claim 10, wherein the first data processing system comprises a host computer system.

16. A method as claimed in claim 10, wherein the second data processing system comprises a data communications interface for communicating data between the host computer system and a data communications network.

17. A computer program product comprising a computer usable medium having computer readable program code means embodied therein for causing control of flow of data between first and second data processing systems, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect the functions of claim 1.

18. A computer program product comprising a computer usable medium having computer readable program code means embodied therein for causing data processing, the

computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect the functions of claim 9.

19. An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for causing control of flow of data between first and second data processing systems, the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect the steps of claim 10.

20. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for controlling flow of data between first and second data processing systems, said method steps comprising the steps of claim 10.